

# Notice of Allowability

Application No.

10/631,991

Applicant(s)

WANG, XIAODONG

Examiner

Ted M. Wang

Art Unit

2611

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08/03/2007 Amendment.
2. ☒ The allowed claim(s) is/are 3-13, 15-17, 21 and 22.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendments and Arguments***

1. Applicants' amendments and arguments, filed on 08/03/2007, with respect to Claims 3-13, 15-17, 21 and 22 have been fully considered. The 35U.S.C.103(a) rejections have been overcome by rewritten those objected claims – dependent claims in independent form including all of the limitations of the base claim and any intervening claims.

### ***Allowable Subject Matter***

2. Claims 3-13 15-17, 21 and 22 are allowed.
3. The following is an examiner's statement of reasons for allowance.
  - The prior art fails to teach an apparatus of Claims 12, 13, 17, 21 and 22 that specifically comprises the following:
    - The instant application is deemed to be directed to a non-obvious improvement over the admitted prior art of the instant application and the PG PUB No. US 2002/0034261, US 2004/0042556 and Yang et al. (A sequential Monte Carlo blind receiver for OFDM systems in frequency-selective fading channels. IEEE Trans. Sig. Proc., 50(2):271-280, February 2002.). The improvement comprises:

With regard claims 12, 13 and 17, "wherein the a priori probability values are represented by  $P(s_k=a_i)$ , where the symbols in a symbol interval are represented by  $s_k$ , and  $k$  is an index identifying a transmit antenna; and  $a_i$  is an  $i$ th value in an alphabet set from which the symbols

take their values." as recited in combination with other limitation as claimed, respectively; and

With regard claims 21 and 22, "(b1) calculating an exact expression for the probability distribution by enumerating m samples for less than all transmit antennas to obtain m data sequences, where m is a number of the deterministic Monte Carlo samples determined for the symbol interval; (b2) computing the importance weight  $w_k^{(i)}$  for each symbol  $s_k^{(i)}$ , where k is an index identifying a transmit antenna; and (b3) selecting and preserving m distinct data sequences with the highest weights;" as recited in combination with other limitation as claimed.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is (571) 272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2611

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

Ted M Wang

Examiner

Art Unit 2611

Ted M. Wang

A handwritten signature in black ink, appearing to read 'Ted M. Wang', is positioned to the right of the printed name.